

Notice of Allowability

Application No.

10/735,575

Examiner

Nikita Wells

Applicant(s)

OBARA ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed 11 December 2003.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☒ The drawings filed on 11 December 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 102804
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Nikita Wells
Primary Examiner
Art Unit: 2881

Detailed Action

Allowable Subject Matter

1. Claims 1-23 are allowed.
2. The following is an examiner's statement of reasons for allowance:

With respect to the independent claims 1, 10, 17, and 21, prior art fails to disclose or make obvious, in combination with other recited features of the claim limitations, a method and a device of analyzing the compositions of defects comprising the steps of: moving a stage and setting a sample placed on the stage to an observation position; obtaining a secondary particle image of a first resolution of the sample by irradiating and scanning a first electron beam focused on the sample set at the observation position and detecting secondary particles emitted from the sample; determining the position of a defect on the sample using the secondary particle image of the first resolution of the sample; obtaining a secondary particle image of a second resolution of the sample by irradiating and scanning an electron beam focused on the determined position of the defect and detecting secondary particles emitted from the sample; obtaining information of a defect region on the sample using the secondary particle image of the second resolution of the sample; selecting a target defect to be analyzed on the basis of the obtained information of the defect region; and analyzing the selected target defect.

With respect to the independent claim 4, prior art fails to disclose or make obvious, in combination with other recited features of the claim limitations, a method and a device of analyzing the composition of defects, comprising the steps of moving a stage and setting a sample placed on the stage to an observation position; obtaining an image of the sample by irradiating and scanning an electron beam focused on the sample set at the observation position;

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determining the positions of plural defects on the sample from the image of the sample;
acquiring magnification images of the plural defects by irradiating and scanning an electron beam focused on the basis of the determined position information; and extracting a target defect to be analyzed on the basis of the magnification images of the acquired plural defects.

The dependent claims 2-3, 11-16, 18-20, and 22-23, are allowable by virtue of their dependence upon the independent claims 1, 10, 17, and 21, respectively. The dependent claims 5-9 are allowable by virtue of their dependence upon the independent claim 4.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nara et al. (6,480,279 B2), Machida et al. (6,476,913 B1), and Ninomiya et al. (6,792,359 B2) disclose a method and apparatus for the inspection of defects in a circuit pattern by using an image formed by the irradiation of a charged particle beam.

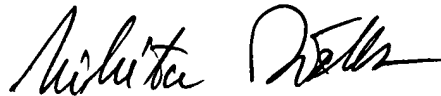
4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikita Wells whose telephone number is (571) 272-2484. The examiner can normally be reached on 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this

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application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Nikita Wells", with a stylized flourish at the end.

Nikita Wells, Primary Examiner
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October 28, 2004